

**Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services**

**STATEMENT OF BASIS**

CLECO Evangeline LLC  
CLECO Evangeline Power Station  
St. Landry Parish, Louisiana  
Agency Interest Number: 1906

Activity Numbers: PER20030001, PER20090001, PER20030004, & PER20070003  
Proposed Permit Numbers: 0920-00002-V3, PSD-LA-635(M-2), 0920-00002-IV1, 0920-00002-IR0

**I. APPLICANT**

**Company:**

CLECO Evangeline LLC  
PO Box 70  
St. Landry, Louisiana 71367

**Facility:**

CLECO Evangeline Power Station  
2180 St Landry Hwy  
St. Landry Parish, Louisiana  
Approximate UTM coordinates are 570.73 kilometers East and 3412.38 kilometers North, Zone 15

**II. FACILITY AND CURRENT PERMIT STATUS**

CLECO operates three (3) gas-fired combustion turbines and Heat Recovery Steam Generators (HRSGs) with duct burners at their Evangeline Power Station. Fossil fuels were previously fired in boiler Units 6 and 7 boilers (as well as the existing Unit 5 boiler/steam turbine that had not operated during a 10-year period). Units 6, 7-1 and 7-2 HRSGs each contain duct burners for supplemental firing capability. The HRSGs produce steam to power the existing Units 6 and 7 steam turbines. The steam generated from the Unit 6 HRSG is used to power the existing Unit 6 steam turbine. The steam generated from the Unit 7-1 and 7-2 HRSGs is used to power the existing Unit 7 turbine. The turbines also have the ability to operate in simple-cycle mode in the event that a malfunction occurs with the steam system or HRSGs.

CLECO - Evangeline Power Station is a designated Part 70 source. The EPS currently operates under Part 70 operating permit, 0920-00002-V2, issued June 29, 2000; Acid Rain permit, 0920-00002-IV1, issued December 21, 1999; and Prevention of Significant Deterioration (PSD) permit, PSD-LA-635 (M-1), issued December 23, 1999.

The facility submitted a timely application for a Part 70 permit renewal, Acid Rain permit renewal, and Clean Air Interstate Rule (CAIR) permit.

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### **III. PROPOSED PROJECT/PERMIT INFORMATION**

#### **Application**

A permit application and Emission Inventory Questionnaire were submitted on July 3, 2003 requesting a Part 70 operating permit. Additional information dated May 18, 2005, December 7, 2006, April 23, 2009, May 14, 2009, and June 3, 2009 was also received.

#### **Project**

In addition to this permit renewal, the following changes are being made:

- A diesel-fired pump (EQT 09) that was previously classified as an insignificant activity has been reclassified as an emission point due to the applicability of 40 CFR 60 Subpart IIII,
- Best Achievable Control Technology (BACT) and emission limitations have been updated for periods of startup and shutdown, and
- Ammonia and formaldehyde emissions are being added. Emission limitations for these pollutants were not included in the previous permit.

#### **Proposed Permit**

Permit 0920-00002-V3 will renew and modify the current Part 70 operating permit for the Acadia Power Station.

Permit PSD-LA-635(M-2) will modify the current Prevention of Significant Deterioration (PSD) permit for the facility.

Permit 0920-00002-IV2 will renew the current Acid Rain Permit for the facility.

Permit 0920-00002-IR0 will be the initial CAIR permit for the facility.

#### **Permitted Air Emissions**

Estimated emissions in tons per year are as follows:

<b>Pollutant</b>	<b>Before</b>	<b>After</b>	<b>Change</b>
PM <sub>10</sub>	238.00	238.05	+0.05
SO <sub>2</sub>	28.10	28.16	+0.06
NO <sub>x</sub>	1304.50	1305.14	+0.64
CO	1,478.90	1,479.21	+0.31

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Pollutant	Before	After	Change
VOC	107.10	101.46	-5.64

LAC 33:III Chapter 51 Toxic Air Pollutants (TAP)			
Pollutant	Before	After	Change
Ammonia	0.00	30.70	+30.70
Formaldehyde	0.00	1.50	+1.50
<b>Total</b>	<b>0.00</b>	<b>32.20</b>	<b>+32.20</b>

#### IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

##### Applicability and Exemptions of Selected Subject Items

ID No.	Requirement	Notes
UNF 01 Evangeline Power Station	Compliance Assurance Monitoring [40 CFR 64]	EXEMPT. The facility is subject to the provisions of Acid Rain. [40 CFR 64.2(b)(1)(iii)]
	Comprehensive Toxic Air Pollutant Emission Control Program [LAC 33:III.Chapter 51]	EXEMPT. The facility is exempt from the requirements of Subchapter A per provisions of LAC 33:III.5105.B.2 and 5105.B.3.a. Electric utility steam-generating units are exempt from Chapter 51 in accordance with LAC 33:III.5105.B.2. Emissions from the combustion of Group 1 fossil fuels (natural gas, liquid petroleum gas, distillate fuel oil, gasoline, diesel, and refinery fuel gas) are exempt in accordance with LAC 33:III.5105.B.3.a. Emissions from the combustion of Group 2 fossil fuels (coal, residual fuel oil, and pet coke) vented from a stack that has a downwash minimization stack height or a height approved by the LDEQ are exempt in accordance with LAC 33:III.5101.B.3.b. [LAC 33:III.5101.A.2]

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ID No.	Requirement	Notes
EQT 02-04 & SCN 01-03	Emission Standards for Sulfur Dioxide Continuous Emissions Monitoring [LAC 33:III.1511.A]  Emission Standards for Sulfur Dioxide Recordkeeping and Reporting [LAC 33:III.1513]	EXEMPT. Units emit less than 250 tons of SO <sub>2</sub> per year. Record and retain at the site for at least 2 years the data required to demonstrate compliance with or exemption from SO <sub>2</sub> standards of Chapter 15. Compliance data shall be reported annually in accordance with LAC 33:III.918.
	National Emission Standard for Hazardous Air Pollutants for Stationary Combustion Turbines [40 CFR 63 Subpart YYYY]	DOES NOT APPLY. Because the Evangeline Power Station is not a major source of air toxics, the turbines are not subject to this subpart.[40 CFR 63.6085(b)]
	Standards of Performance for Stationary Gas Turbine [40 CFR Subpart GG]	CLECO shall use data collected through required Part 75 monitoring to demonstrate compliance with the NO <sub>x</sub> emission limits in Subpart GG. The data collection system shall provide all the necessary data to ensure compliance with both the monitoring provisions of 40 CFR Part 75 and emission limits of Subpart GG. [40 CFR 60.334(c)]
	Standards of Performance for Stationary Combustion Turbines [40 CFR 60 Subpart KKKK]	DOES NOT APPLY. The gas turbines were not constructed, modified, or reconstructed after February 18, 2005. [40 CFR 60.4305(a)]
	Compliance Assurance Monitoring [40 CFR 64]	EXEMPT. The turbines are subject to continuous emissions monitoring under the Acid Rain Program, 40 CFR 75. [40 CFR 64.2(b)(iii)]
EQT 05	Storage of Volatile Organic Compounds [LAC 33:III.2103]	DOES NOT APPLY. Container volumes are less than 250 gallons. [LAC 33:III.2103.A]
EQT 06 – 08	Emission Standards for Sulfur Dioxide [LAC 33:III.Chapter 15]	DOES NOT APPLY. Units emit less than 5 TPY of SO <sub>2</sub> .

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**Prevention of Significant Deterioration/Nonattainment Review**

The PSD permit is being modified in permit no. PSD-LA-635 (M-2) to include the emissions and updated BACT during startup and shutdown operations at the Evangeline Power Station.

**Streamlined Equipment Leak Monitoring Program**

There is no streamlined equipment leak monitoring program at the facility.

**MACT Requirements**

The facility is exempt from the provisions of Chapter 51 of the LAC Title 33, Part 3 and is not subject to the National Emission Standards for Hazardous Air Pollutant (NESHAP).

**Air Quality Analysis**

Dispersion Model(s) Used: AERMOD (Screen)

<b>Pollutant</b>	<b>Time Period</b>	<b>Calculated Maximum Ground Level Concentration</b>	<b>Louisiana Toxic Air Pollutant Ambient Air Quality Standard</b>
Ammonia	8-hr. average	0.195 $\mu\text{g}/\text{m}^3$	640.00 $\mu\text{g}/\text{m}^3$

**General Condition XVII Activities**

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

**Insignificant Activities**

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

**V. PERMIT SHIELD**

There is no permit shield.

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**VI. PERIODIC MONITORING**

<b>Source ID</b>	<b>Citation(s)</b>	<b>Monitoring Requirement</b>
CRG 01 Acid Rain	40 CFR 75.10(a)(2)	NO <sub>x</sub> monitored by CEMS.
EQT 06 & 07 7-1 & 7-2 Duct Burners	40 CFR 60.48b(b)(2)	CEMS required under Part 75 shall be used to monitor NO <sub>x</sub> emissions from these sources.
EQT 08 Unit 6 Duct Burner	40 CFR 60.48Da(g)(1), 40 CFR 60.48Da(g)(3), 40 CFR 60.48Da(i)	PM, NO <sub>x</sub> , and SO <sub>2</sub> shall be monitored by calculating each pollutant's arithmetic average of all hourly emission rates each day.
	40 CFR 60.49Da(d)	O <sub>2</sub> or CO <sub>2</sub> shall be monitored by CMS continuously.
GRP 02 Gas Turbines	40 CFR 60.334(h)(1)	Total sulfur content of the fuel being fired shall be monitored as described in 40 CFR 60.335(b)(10), except as described in 40 CFR 60.334(h)(3).
	40 CFR 60.334(h)(2)	Total nitrogen content of the fuel being fired shall be monitored as described in 40 CFR 60.335(b)(9) or an approved alternative.

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## **VII. GLOSSARY**

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H<sub>2</sub>S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO<sub>x</sub>) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH<sub>4</sub>), Ethane (C<sub>2</sub>H<sub>6</sub>), Carbon Disulfide (CS<sub>2</sub>)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit:  $\geq 10$  tons per year of any toxic air pollutant;  $\geq 25$  tons of total toxic air pollutants; and  $\geq 100$  tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM<sub>10</sub> – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

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Sulfur Dioxide (SO<sub>2</sub>) – An oxide of sulfur.

Sulfuric Acid (H<sub>2</sub>SO<sub>4</sub>) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.